

ISS packet on 437.550 MHz

Among the different configurations supported by radios on the International Space Station, one that is rarely used is packet on 437.550 MHz simplex. This was used in late 2016 and early 2017 after a failure of an ISS VHF radio, and more recently the Kenwood TM-D710G in the Russian service module was placed into this configuration. Users of the ISS packet digipeater will have to compensate for Doppler on the uplink and downlink, even though the radio on the ISS will only have a simplex frequency. Other than having to compensate for Doppler, ISS packet on 437.550 MHz functions like it did on 145.825 MHz.

For handheld radios, FM mobile transceivers, and possibly other radios capable of operating on 70cm FM, programming a group of 5 memory channels which compensate for Doppler will allow for ISS packet operations on the 70cm band. For ISS packet on 437.550 MHz, use the following group of memory channels:

<u>Channel</u>	<u>Receive (MHz)</u>	<u>Transmit (MHz)</u>	<u>Offset</u>
1	437.560	437.540	-0.02 MHz
2	437.555	437.545	-0.01 MHz
3	437.550	437.550	(no offset, simplex)
4	437.545	437.555	+0.01 MHz
5	437.540	437.560	+0.02 MHz

Memory channels in some radios will accept separate receive and transmit frequencies, while the memory channels in other radios will accept the receive frequency along with the size and direction of the offset.

Be ready to switch between the first 2 memory channels from the listing above after a minute or so into the pass, and near the end switch between memory channels 4 and 5. There could be moments near AOS and LOS – and maybe other points during the pass – where the downlink signal falls between the receive frequencies for a couple of memory channels. At these points, your software or TNC may not be able to decode packets, until the downlink frequency is closer to the receive frequency in the next memory channel.

Good luck, and 73!